

C L A I M S

1. A coating apparatus for an optical lens,
2 characterized by comprising:

3 a coating device which applies a coating
4 solution to a coating target surface of an optical lens;

5 a light beam radiating device which emits a
6 light beam to the coating solution applied to the
7 optical lens to cure the coating solution; and

8 a lens rack which stores a set of two optical
9 lenses and conveys the stored optical lenses from a
10 coating position to a curing position of the coating
11 solution,

12 said coating device comprising two rotary
13 tables where the set of two optical lenses are set each
14 with the coating target surface thereof facing up, a
15 driving device which rotates said rotary tables
16 independently of each other, and two coating solution
17 dripping means each for dripping the coating solution
18 onto the coating target surface of the optical lens set
19 on said rotary tables,

20 wherein said light beam radiating device emits
21 the light beam to the optical lenses in said lens rack
22 with said lens rack being hermetically closed.

2. A coating apparatus for an optical lens
2 according to claim 1, characterized in that

3 said light beam radiating device comprises a

4 light source stored in a housing and a transparent
5 member which covers an opening of said housing on a
6 irradiation direction side and transmits the light beam
7 emitted from said light source therethrough, and
8 said lens rack has a storing portion in and
9 from which the optical lenses can be stored and
10 extracted, said storing portion having such a shape as
11 to be closed when said lens rack is brought into tight
12 contact with said transparent member through a seal
13 member.

3. A coating apparatus for an optical lens
2 according to claim 1, characterized in that
3 said lens rack has two cases at least one of
4 which is disposed to be movable to come into contact
5 with and separate from the other and which respectively
6 store optical lenses, and biasing means for biasing said
7 two cases to approach each other,
8 said two cases being held spaced apart from
9 each other when optical lenses coated with a coating
10 solution are to be stored therein, and being held in
11 contact with each other when the coating solution
12 applied to the optical lenses is to be cured.

4. A coating apparatus for an optical lens
2 according to claim 1, characterized in that air in said
3 lens rack is purged with an inert gas when the coating
4 solution applied to the optical lenses is to be cured.

5. A coating apparatus for an optical lens

2 according to claim 1, characterized in that said lens
3 rack comprises an air exhaust channel through which
4 internal air is exhausted and an inert gas supply
5 channel through which an inert gas is supplied.

6. A coating apparatus for an optical lens
2 according to claim 1, characterized in that said coating
3 device further comprises a spatula mechanism which
4 removes the coating solution staying on a peripheral
5 portion of the coating target surface of the optical
6 lens.

7. A coating apparatus for an optical lens
2 according to claim 1, characterized in that said coating
3 device further comprises a lens outer surface solution
4 smoothening mechanism which uniformes a film thickness of
5 the coating solution attaching to an outer surface of
6 the optical lens.

8. A coating apparatus for an optical lens
2 according to claim 1, characterized in that said coating
3 device further comprises a coating solution collection
4 device which collects an extra coating solution that has
5 scattered from the optical lens.

9. A lens rack employed when a coating solution
2 applied to an optical lens is to be cured by irradiation
3 with a light beam, characterized by comprising:
4 a stationary case and a movable case each
5 having an upwardly open storing portion which stores the
6 optical lens coated with the coating solution; and

7 biasing means for biasing said movable case
8 toward said stationary case,
9 each of said stationary case and said movable
10 case comprising a lens placing portion which is arranged
11 in said storing portion and on which the optical lens is
12 to be placed with a coating target surface thereof
13 facing up, an exhaust channel through which air in said
14 storing portion is exhausted, and an inert gas supply
15 channel through which an inert gas is supplied into said
16 storing portion, wherein air in said storing portion is
17 purged with the inert gas when the coating solution is
18 to be cured.

10. A lens rack according to claim 9,
2 characterized in that
3 said storing portion of each of said
4 stationary case and said movable case comprises a hole
5 in which the optical lens is to be inserted, and at
6 least three pin grooves each of which has one end
7 communicating with said hole and in which pins to clamp
8 the optical lens are to be inserted respectively, and
9 the hole is tapered such that a diameter
10 thereof increases upward.

11. A lens rack according to claim 9,
2 characterized in that
3 said movable case and said stationary case are
4 held spaced apart from each other when the optical lens
5 coated with the coating solution is to be stored in each

6 thereof, and are held in contact with each other when
7 the coating solution is to be cured by irradiation with
8 the light beam and when the optical lens is to be
9 extracted from said storing portion.